Why cares about storm water? The City of Rockford must comply with an unfunded mandate concerning storm water regulations from the State of Illinois which is enforced by the Illinois Environmental Protection Agency (IEPA) and federally by the Environmental Protection Agency (EPA). These regulations require the City of Rockford to apply for a National Pollutant Discharge Elimination System (NPDES) permit to discharge municipal storm water into surface waters of the state (i.e. our creeks and rivers). In order for the City of Rockford to comply with this permit the City must develop and implement a storm water management plan to ensure that our storm water is clean water. Clean water is not a matter of choice - it's a matter of health.

The City of Rockford's Storm Water Management Plan requires the following:

1. Statutory Requirements, implementing controls to reduce the discharge of pollutants to the City's storm system.
2. Monitoring of all structural controls, i.e. detention basins and streambanks.
3. Erosion and sediment control enforcement on construction projects.
4. Roadway management, street sweeping, salting, inlet cleaning.
5. Flood Control; assess effect of flood management projects on receiving water quality.
6. Pesticide, Herbicide & Fertilizer Applications, implement controls and educate on ways to properly apply and/or to reduce application rates
7. Illicit Discharge Detection, Implement program to prohibit dumping of non-storm water discharges into the City's storm sewer system.
8. Spill Prevention and Response, Have procedures in place prevent, contain and respond to spills.
9. Industrial and High Risk Runoff, implement program to identify, monitor and control pollutants from industrial facilities.
10. Public Education, Pollution Prevention and Good Housekeeping, educate the public and staff on ways to reduce storm water pollution.

What is storm water runoff? Storm water runoff is water from rain or melting snow that "runs off" across the land instead of seeping into the ground. This runoff usually flows into the nearest stream, creek, river, lake or ocean. The runoff is not treated in any way.

What is polluted runoff? Water from rain and melting snow either seeps into the ground or "runs off" to lower areas, making its way into streams, lakes and other water bodies (rivers). On its way, runoff water can pick up and carry many substances that pollute water. Some - like pesticides, fertilizers, oil and soap – are harmful in any quantity. Others – like sediment from construction, bare soil, or agricultural land, or pet waste, grass clippings and leaves – can harm creeks, rivers and lakes in sufficient quantities. In addition to rain and snowmelt, various human activities like watering, car washing, and malfunctioning septic tanks can also put water onto the land surface. Here, it can also create runoff that carries pollutants to creeks, rivers and lakes.

Polluted runoff generally happens anywhere people use or alter the land. For example, in developed areas, none of the water that falls on hard surfaces like roofs, driveways, parking lots or roads can seep into the ground. These impervious surfaces create large amounts of runoff that pick up pollutants. The runoff flows from gutters and storm drains to streams. Runoff not only pollutes' but erodes stream banks. The mix of pollution and eroded dirt muddies the water and causes problems downstream.

What is Nonpoint Source Pollution? This is another term for polluted runoff and other sources of water pollution that are hard to pinpoint. The term "nonpoint source pollution" comes from the Federal Clean Water Act of 1987. There, it is used as a catch-all for all kinds of water pollution that are not well-defined discharges (point sources) from wastewater plants or industries.

Many state agencies have nonpoint source (NPS) management programs that address polluted runoff (http://www.epa.state.il.us/water/watershed/nonpoint-source.html). It serves as the central coordinating agency for the many NPS-related programs operated by various agencies.

What causes polluted storm water runoff? Polluted storm water runoff generally happens anywhere people use or alter the land. People going about their daily lives are the number one source of storm water pollutants. Most people are unaware of how they impact water quality. Some common examples include over fertilizing lawns, excessive pesticide use, not picking up pet waste, using salt or fertilizer to de-ice driveways, letting oil drip out of their vehicles and littering. Developed areas in general, with their increased runoff, concentrated numbers of people and animals, construction and other activities, are a major contributor to NPS pollution, as are agricultural activities. Other contributors include forest harvesting activities, roadways, and malfunctioning septic systems.

Why do we need to manage storm water and polluted runoff? Polluted storm water runoff is a major cause of water pollution in Illinois. In most cases in Illinois, storm water either does not receive any treatment before it enters our waterways or is inadequately treated.

Polluted water creates numerous costs to the public and to wildlife. As the saying goes, "we all live downstream." Communities that use surface water for their drinking supply must pay more to clean up polluted water than clean water.

Polluted water hurts the wildlife in creeks, streams, rivers and lakes. Dirt from erosion, also called sediment, covers up fish habitats and fertilizers can cause too much algae to grow, which also hurts wildlife by using up the oxygen they need to survive. Soaps hurt fish gills and fish skin, and other chemicals damage plants and animals when they enter the water.

The quantity of storm water is also a problem. When storm water falls on hard surfaces like roads, roofs, driveways and parking lots, it cannot seep into the ground, so it runs off to lower areas. To give you an idea of the difference a hard surface makes, consider the difference between one inch of rain falling onto a meadow and a parking lot. The parking lot sheds sixteen times the amount of water that a meadow does!

Because more water runs off hard surfaces, developed areas can experience local flooding. The high volume of water also causes streams banks to erode and washes the wildlife that lives there downstream.

How are storm water and runoff "managed"? "Best management practices" is a term used to describe different ways to keep pollutants out of runoff and to slow down high volumes of runoff.

Preventing pollution from entering water is much more affordable than cleaning polluted water! Educating residents about how to prevent pollution from entering waterways is one best management practice. Laws that require people and businesses involved in earth disturbing activities - like construction and agriculture - to take steps to prevent erosion are another way to prevent storm water pollution. There are also laws about litter, cleaning up after pets and dumping oil or other substances into storm drains.

Education and laws are just two best management practice examples. Some BMPs are constructed to protect a certain area. Some are designed to slow down storm water, others help reduce the pollutants already in it – there are also BMPs that do both of these things.

Detention ponds hold water so it infiltrates into the earth. They fill up quickly after a rainstorm and allow solids like sediment and litter to settle at the pond bottom. Then, they release the water slowly. These ponds are one constructed BMP example. Green roofs, storm drain grates, filter strips, sediment fences and permeable paving are other examples.

If it only affects streams and creeks, why should I care? Streams and creeks feed into rivers, lakes and the ocean. We all drink water, so we are all affected when our water is polluted. When water treatment costs rise, the price of drinking water goes up. If you like to fish, swim or boat, you may have heard or been affected by advisories warning you not to swim, fish or boat in a certain area because of unhealthy water or too much algae. Shellfish like clams and oysters cannot be harvested from polluted waters, so anyone that enjoys these foods or makes a living from the shellfish industry is affected. Money made from tourism and water recreation can also be impacted, as are businesses and homes flooded by storm water runoff. When we pollute our water, everyone is affected!

How does this benefit the average taxpayer? When our water is polluted, we all pay in one way or another. Damage from urban flooding can raise merchant prices and insurance rates. Sediment and pollution laden water takes more money to treat before it can be used for drinking water. Tourism and recreation businesses suffer along with residents when swimming, fishing and boating are curtailed. Shellfish become more expensive and harder to harvest when shellfish beds close. And the list goes on. Because everyone plays a role in creating the pollution in storm water runoff, we all have a role in cleaning it up.

What can I do to make a difference at home and reduce the amount of storm water pollution? Amazingly enough you can make a huge difference in storm water quality by simply changing a few practices at home. Here are six easy steps: 1) Wash your car on the lawn, 2) Mulch your grass clippings and leave on the lawn, 3) Sweep dirt from your driveways and sidewalks onto the lawn, pick up debris and put in the trash, 4) Pick up your pet waste; and put it in the dumpster, 5) Use fertilizers and pesticides sparingly and always follow the suggested application rate, never apply chemicals before a rain, 6) Take leftover paint, used oil, and leftover chemicals Rock River Water Reclamation District, 3333 Kishwaukee St., Rockford, IL 61109 (www.Earth911.com). Check out our publications for more tips. Remember, we all live downstream.

How else can I help reduce storm water pollution? Report storm water violations when you spot them. Violations can be reports on the City of Rockford's website or by calling the hotline (815-987-5570). Keep learning about polluted storm water runoff and tell a friend!

What is a catch basin or storm drain? A catch basin or storm drain is a curbside drain with the sole function of collecting rainwater from our properties and streets and sending it through underground piping to our local waterways. Storm drains can also be found in parking lots and serve the same purpose. In county and city areas, that water never goes to the sewer treatment plant to be cleaned, but flows directly into our creeks and rivers.

Are sewers and storm drains the same things? In the City of Rockford, sewers and storm drains are two completely different drainage systems. Sewers carry wastewater from such things as washing machines, sinks, toilets, and showers to a treatment plant to be cleaned prior to being discharged into the Rock River. The storm drain system collects rainwater, and anything else dumped into it, and carries it to either a detention basin or directly a creek or river.

Do catch basins and storm drains get cleaned out? Yes, the City of Rockford regularly performs maintenance activities including cleaning of the storm drain system. In addition, the City of Rockford crews are always available to respond to emergency situations where clogged drains result in localized flooding.

Why doesn't the City of Rockford clean out all of the storm drains before a storm? City crews clean out clogged catch basins throughout the year as part of ongoing maintenance. Unfortunately, there are just too many catch basins and not enough time. Residents can reduce flooding in their neighborhoods by keeping material out of the storm drain system or clean debris around catch basins when performing landscape maintenance.

Why doesn't the City of Rockford install filters or screens in front of the catch basins? It sounds like a good idea, but during a rainstorm, debris (e.g. leaves, sticks, trash) is quickly swept to the catch basin and any screen or filtration device placed in front of the catch basin would clog the grate and result in flooding.

Why isn't a net/fence/barrier installed at the end of the storm drain channel to catch all of the trash? Unfortunately, nets only catch larger pieces of trash - all of the pollutants like pet waste, used oil, paint, pesticides, fertilizers, etc. flow through the net and straight into our waterways.

What kinds of pollutants are found in the storm drain system? Human and animal feces, paint thinner and paint products, motor oil, pesticides, trash, paper, antifreeze, leaves, grass clippings, cooking oil, clothes, tennis shoes, shopping carts, tires, dirty diapers, and plastic containers are but a few of the pollutants found in the system.

What should I do if I see a neighbor throwing trash, used oil or paint into a storm drain? The storm drain system is for the sole purpose of collecting rainwater overflow. Dumping trash, pollutants and debris in the catch basins is illegal and is a Federal violation of the Clean Water Act of 1972. A neighbor may not understand the catch basin's direct connection to the Rock River and all of our other waterways. It may be just a matter of making them aware of the impact to our community and our drinking water. Dumping used oil and paint is illegal. One quart of motor oil can pollute 250,000 gallons of drinking water. Paint also contaminates our waters. City staff would be more than happy to provide information to your neighbor. To report the problem, call the City of Rockford's hotline (815-987-5570) or submit a complaint on the city of Rockford's website.

How can I properly dispose of left-over paints, thinners, chemicals, car batteries, used oil, etc.? Rock River Water Reclamation District, 3333 Kishwaukee St., Rockford, IL 61109 (www.Earth911.com).

Is it okay to wash my car on the driveway if I use a biodegradable soap? No. Cleaning products, even if they are biodegradable can still be toxic to fish and stimulate algae and plant growth. One option is to have vehicles cleaned at a commercial car wash where wastewater flows through sand and oil traps. When washing your car at home, pull it up on the lawn or a graveled area where water will leach into the ground instead of flowing into the street gutter and the storm drains. Always use biodegradable soaps when washing a vehicle and conserve as much water as possible. Shut off water while washing your car, then rinse.

Yard clippings and leaves are natural, so they don't cause any problems, right? Wrong. Grass, leaves and yard clippings that are repeatedly swept into catch basins can clog the drain, causing localized flooding and become a potential breeding ground for rodents and insects. Additionally, when this material reaches our creeks and rivers, it decomposes and robs the surrounding water of oxygen. The cumulative effect of numerous residents putting leaves, grass and yard clippings into the street gutter or storm drain can be overwhelming. It can turn clean storm water into a rotten, black, stinky soup that then enters our creeks and rivers.

Is there a fine/penalty for illegal dumping? Yes. The fine will vary depending on which local or state agency assesses the fine. There are numerous Federal, State, and municipal laws that prohibit illegal dumping, especially when it affects surface water quality. The City will investigate all reports of dumping of material into the storm drain system. Anyone caught dumping can be cited and a fine imposed.

How does pet waste left on the grass affect storm water? Pet waste can be picked up by snow melt or rain as it travels into the street gutter and down the storm drain, carrying with it bacteria and other harmful materials into our creeks and streams. The dog population in the Rockford area is estimated to be 38,500 animals (American Veterinary Medicine Association), creating nearly 28,000 pounds of solid waste every day. Even though you can't see it, the fecal coliform contained in pet waste can have a cumulative affect with hundreds if not thousands of people sending their pet waste into the storm water. Storm water is not treated, so this material flows directly into our creeks and river, where our children play, swim, and fish. Disposing of pet waste properly is a key to keeping our creeks and river safe.